



## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Assistant Commissioner for Patents  
Washington, DC 20231

Sir:

**POWER OF ATTORNEY WITH REVOCATION AND  
CHANGE OF CORRESPONDENCE ADDRESS**

I hereby revoke all previous powers of attorney or authorizations of agent given in the applications identified in Table A attached hereto, and appoint

Practitioners at Customer Number: 34138



as my/our attorney(s) or agent(s) to prosecute the application identified above, and to transact all business in the United States Patent and Trademark Office connected therewith.

Please change the Correspondence Address for all applications identified in Table A to:

Practitioners at Customer Number: 34138

I am the:

Applicant/Inventor.

Assignee of record of the entire interest. (A statement under 37 CFR 3.73(b) is enclosed.)

Respectfully submitted,

ISIS PHARMACEUTICALS, INC.

Date: 5-30-03

By: \_\_\_\_\_

Name: B. Lynne Parshall  
Title: Executive Vice President

AUG 06 2003

102  
PATENT & TRADEMARK OFFICE  
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Assistant Commissioner for Patents  
Washington, DC 20231

Sir:

**STATEMENT UNDER 37 CFR 3.73(b)**Applicant, **ISIS Pharmaceuticals, Inc.**, a corporation, states that it is:

the assignee of the entire right, title, and interest of the applications identified in Table A attached hereto.

The extent (by, percentage) of its ownership interest is 100% in the patent applications identified in Table A by virtue of:

a copy of the pertinent assignment from the inventor(s) of the patent applications identified in Table A is enclosed herewith.

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

Respectfully submitted,  
**ISIS PHARMACEUTICALS, INC.**

Date: 5-30-03

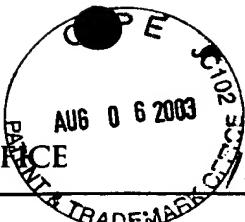
By: \_\_\_\_\_  
Name: B. Lynne Parshall  
Title: Executive Vice President

TABLE A

SERIAL NO.	FLING DATE	INVENTORS	EXAMINER	ART UNIT	TITLE
09/546,596	April 10, 2000	Cook, Manoharan, Bennett	J.N. Fredman	1637	Compositions and Methods for Enhanced Biostability and Altered Biodistribution of Oligonucleotides in Mammals
09/902,953	July 11, 2001	Krotz, Mehta	J.Schultz	1635	Enhancement of the Stability of Oligonucleotides Comprising Phosphorothioate Linkages by addition of Water-Soluble Antioxidants
09/944,493	August 22, 2001	Weinbach, Tillman, Geary, Hardee	Not Yet Determine	1615	Pulsatile Release Compositions and Methods for Enhanced Intestinal Drug Absorption
09/935,316	August 22, 2002	Teng, Weinbach, Tillman, Geary, Hardee	Not yet determined	1632	Biodehesive Compositions and Methods for Enhanced Intestinal Drug Absorption
10/029,598	December 21, 2001	Teng, Cook, Tillman, Hardee, Ecker, Manoharan	J. Epps	1635	Compositions and Methods for Non-Parenteral Delivery of Oligonucleotides
09/315,294	May 20, 1999	Mehta, Hardee, Cook, Ecker, Tsai, and Templin	M. Schmidt	1635	Compositions and Methods for Topical Delivery of Oligonucleotides
09/315,298	May 20, 1999	Teng, Cook, Tillman, Hardee, Ecker and Manoharan	J. Epps	1635	Compositions and Methods for Non-Parenteral Delivery of Oligonucleotides
09/108,673	July 1, 1998	Teng, and Hardee	W. Sandals	1636	Compositions and Methods for the Delivery of Oligonucleotides via the Alimentary Canal



UNITED STATES  
PATENT AND  
TRADEMARK OFFICE



JWC/ML/ERI  
( )

APRIL 25, 2002

PTAS

Commissioner for Trademarks  
Arlington, VA 22202-3513  
www.uspto.gov

WOODCOCK WASHBURN LLP  
EMMA R. DAILEY  
ONE LIBERTY PLACE - 46TH FLOOR  
PHILADELPHIA, PA 19103-7301

RECEIVED

APR 29 2002



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U.S. PATENT AND TRADEMARK OFFICE  
RECORDATION OF ASSIGNMENT DOCUMENT

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT DIVISION OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, CG-4, 1213 JEFFERSON DAVIS HWY, SUITE 320, WASHINGTON, D.C. 20231.

RECORDATION DATE: 02/19/2002

REEL/FRAME: 012622/0866

NUMBER OF PAGES: 8

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:

TENG, CHING-LEOU

DOC DATE: 12/04/2001

ASSIGNOR:

WEINBACH, SUSAN P.

DOC DATE: 12/11/2001

ASSIGNOR:

TILLMAN, LLOYD G.

DOC DATE: 12/11/2001

ASSIGNOR:

GEARY, RICHARD S.

DOC DATE: 12/06/2001

ASSIGNOR:

HARDEE, GREGORY E.

DOC DATE: 12/11/2001

ASSIGNEE:

ISIS PHARMACEUTICALS, INC.  
2292 FARADAY AVENUE  
CARLSBAD, CALIFORNIA 92008

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APR 29 2002  
DOCKET DEPT.  
WWKMN

COMMITTEE TO CLIENT  
5/4/02

012622/0866 PAGE 2

SERIAL NUMBER: 09935316  
PATENT NUMBER:

FILING DATE: 08/22/2001  
ISSUE DATE:

SHARON BROOKS, EXAMINER  
ASSIGNMENT DIVISION  
OFFICE OF PUBLIC RECORDS

M2D  
03-06-2002

21912

102002965

T

To Th Honorable Commissioner of Patents and Trademarks. Please record the attached original documents or copy thereof.

## 1. Name of conveying party(ies):

Ching-Lou Teng  
First AssignorDecember 4, 2001  
Date of ExecutionSusan P. Weinbach  
Second AssignorDecember 11, 2001  
Date of ExecutionLloyd G. Tillman  
Third AssignorDecember 11, 2001  
Date of ExecutionRichard S. Geary  
Fourth AssignorDecember 6, 2001  
Date of ExecutionGregory E. Hardee  
Fifth AssignorDecember 11, 2001  
Date of Execution

Sixth Assignor

Date of Execution

Additional name(s) of conveying party(ies) attached?  YES  NO

## 2. Name and address of receiving party(ies):

Name: ISIS Pharmaceuticals, Inc.

Street Address: 2292 Faraday Avenue

City: Carlsbad

State California ZIP 92008

Additional name(s) & address attached?  YES  NO

## 3. Nature of Conveyance (check only one):

New Assignment  Merger  
 License Agreement  Security Agreement  
 Change of Name  Other:

Cross-reference of Assignment filed in United States Application No. \_\_\_\_\_, recorded on \_\_\_\_\_ at Reel No. \_\_\_\_\_ and Frame No. \_\_\_\_\_

## 4. Identification of Application number(s), patent number(s) OR date of execution of application to which assignment refers:

Application Nos.:

Patent Nos.:

Date application was signed by the first named executing inventor

09/935,316 filed August 22, 2001

(Fill-in this date only if assignment is filed together with a new application)

## 5. Name and address of party to whom correspondence concerning documents should be mailed:

Name: Emma R. Dailey  
 WOODCOCK WASHBURN LLP  
 One Liberty Place - 46th Floor  
 Philadelphia, Pennsylvania 19103-7301  
 215-568-3100

## 6. Total number of applications and patents involved: \_\_\_\_\_

7. Total fee (37 CFR 3.41): ..... \$40.00

Enclosed  
 Authorized to be charged to Deposit Account Number 23-3050

8. Please charge any deficiency or credit any overpayment to Deposit Account Number 23-3050

DO NOT USE THIS SPACE

## 9. Statement and signature.

*To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.*

Emma R. Dailey/48,491

Name of Person Signing/Reg. No.

Signature

January 30, 2002

Date

Total number of pages including cover sheet, assignment document and additional pages attached thereto: 6

Mail documents to be recorded with required cover sheet information to:

Commissioner of Patents and Trademarks  
 Box Assignments  
 Washington, D.C. 20231

03/05/2002 TDI021 00000224 09935316

40.00 00

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**A S S I G N M E N T**

WHEREAS, we, **Ching-Leou Teng of San Diego, California; Susan Weinbach of San Diego, California; Lloyd G. Tillman of Carlsbad, California; Richard S. Geary of Carlsbad, California; and Gregory E. Hardee of Rancho Santa Fe, California**, have invented a certain invention entitled **Bioadhesive Compositions and Methods for Enhanced Intestinal Drug Absorption**, for which we have made an application for Letters Patent of the United States, said application having been filed **August 22, 2001** and assigned Application No. **09/935,316**; and

WHEREAS, ISIS Pharmaceuticals, Inc. hereinafter referred to as the assignee, of 2292 Faraday Avenue, Carlsbad CA, a corporation of Delaware, is desirous of acquiring the entire right, title and interest in and to the said inventions or improvements and in and to the said application, and in, to and under any and all Letters Patent which may be granted on or as a result thereof in any and all countries:

NOW, THEREFORE, for and in consideration of the sum of One Dollar (\$1.00) to each of us in hand paid by said assignee, and other good and valuable consideration, the receipt of which is hereby acknowledged, we, the said assignors, have sold, assigned, transferred and set over, and by these presents do hereby sell, assign, transfer and set over to said assignee, the entire right, title and interest in and to said inventions or improvements and said application and any and all continuations, divisions and renewals of and substitutes for said application, and in, to and under any and all Letters Patent which may be granted on or as a result thereof in the United States and any and all other countries, and any reissue or reissues or extension or extensions of said Letters Patent, and assign to and authorize said assignee, to file in our names applications for Letters Patent in all countries, the same to be held and enjoyed by said assignee, its successors, assigns, nominees or legal representatives, to the full end of the term or terms for which said Letters Patent respectively may be granted, reissued or extended, as fully and entirely as the same would have been held and enjoyed by us had this assignment, sale and transfer not been made.

AND we hereby covenant that we have full right to convey the entire interest herein assigned, and that we have not executed and will not execute any agreement in conflict herewith, and we further covenant and agree that we will each time request is made and without undue delay, execute and deliver all such papers as may be necessary or desirable to perfect the title to said inventions or improvements, said application and said Letters Patent to said assignee, its successors, assigns, nominees, or legal representatives, and each of us agrees to communicate to said assignee or to its nominee all known facts respecting said inventions or improvements, said application and said Letters Patent, to testify in any legal proceedings, to sign all lawful papers to execute all disclaimers and divisional, continuing, reissue and foreign applications, to make all rightful oaths, and generally to do everything possible to aid said assignee, its successors, assigns, nominees and legal representatives to obtain and enforce for its or their own benefit proper patent protection for said inventions or improvements in any and all countries.

AND we hereby authorize and request the Commissioner of Patents and Trademarks of the United States and any official of any country or countries foreign to the United States whose duty it is to issue patents on applications as aforesaid, to issue to said assignee, as assignee of the entire right, title and interest, any and all Letters Patent for said inventions or improvements, including any and all Letters Patent of the United States which may be issued and granted on or as a result of the application aforesaid, in accordance with the terms of this assignment.

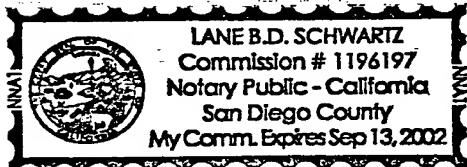
IN WITNESS WHEREOF, we have hereunto set our hands and seals.

Dated: 12/01, 2001

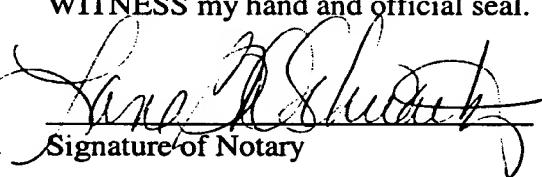
Ching-Leou Teng  
Ching-Leou Teng

State of California )  
 ) ss.  
County of San Diego )

On this 4th day of December, 2001, before me, the undersigned, a Notary Public for the state, personally appeared **Ching-Leou Teng**, personally known to me/proved to me on the basis of satisfactory evidence to be the person who subscribed the foregoing Assignment and acknowledged to me that he/she executed the same in his/her authorized capacity, and that by his/her signature on the Assignment the person, or the entity on behalf of which the person acted, executed the Assignment.



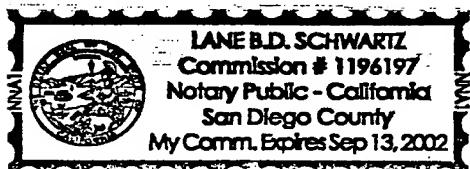
WITNESS my hand and official seal.

  
Signature of Notary

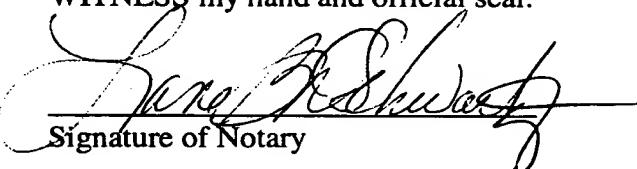
Dated: Dec 11, 2001  
Susan Weinbach

State of California )  
 ) ss.  
County of San Diego )

On this 11th day of December, 2001, before me, the undersigned, a Notary Public for the state, personally appeared Susan Weinbach, personally known to me/proved to me on the basis of satisfactory evidence to be the person who subscribed the foregoing Assignment and acknowledged to me that he/she executed the same in his/her authorized capacity, and that by his/her signature on the Assignment the person, or the entity on behalf of which the person acted, executed the Assignment.



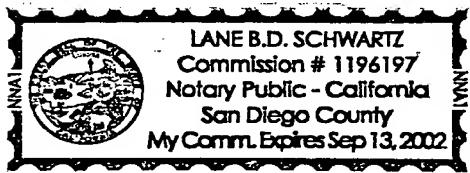
WITNESS my hand and official seal.

  
Signature of Notary

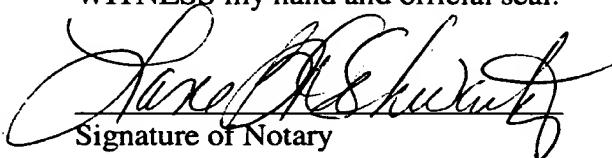
Dated: Dec 11, 2001  
Lloyd G. Tillman

State of California )  
 ) ss.  
County of San Diego )

On this 11<sup>th</sup> day of December, 2001, before me, the undersigned, a Notary Public for the state, personally appeared Lloyd G. Tillman, personally known to me/proved to me on the basis of satisfactory evidence to be the person who subscribed the foregoing Assignment and acknowledged to me that he/she executed the same in his/her authorized capacity, and that by his/her signature on the Assignment the person, or the entity on behalf of which the person acted, executed the Assignment.



WITNESS my hand and official seal.

  
Signature of Notary

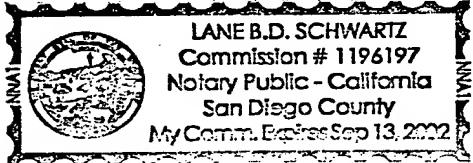
Dated: Dec. 6, 2001

  
**Richard S. Geary**

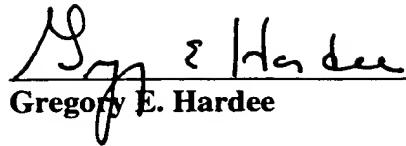
**State of California** )  
 )  
**County of San Diego** )

On this 6<sup>th</sup> day of December, 2021, before me, the undersigned, a Notary Public for the state, personally appeared **Richard S. Geary**, personally known to me/proved to me on the basis of satisfactory evidence to be the person who subscribed the foregoing Assignment and acknowledged to me that he/she executed the same in his/her authorized capacity, and that by his/her signature on the Assignment the person, or the entity on behalf of which the person acted, executed the Assignment.

**WITNESS** my hand and official seal.



Signature of Notary

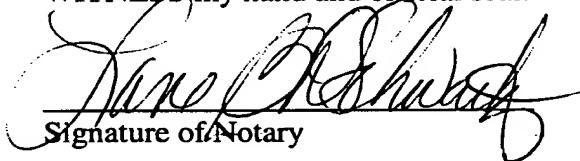
Dated: Dec. 11, 2001  
\_\_\_\_\_  
Gregory E. Hardee

State of California )  
 ) ss.  
County of San Diego )

On this 11th day of December, 2001, before me, the undersigned, a Notary Public for the state, personally appeared **Gregory E. Hardee**, personally known to me/proved to me on the basis of satisfactory evidence to be the person who subscribed the foregoing Assignment and acknowledged to me that he/she executed the same in his/her authorized capacity, and that by his/her signature on the Assignment the person, or the entity on behalf of which the person acted, executed the Assignment.



WITNESS my hand and official seal.

  
\_\_\_\_\_  
Signature of Notary

**RECORDATION FORM COVER SHEET  
PATENTS ONLY**

To The Honorable Commissioner of Patents and Trademarks. Please record the attached original documents or copy thereof.

1. Name of conveying party(ies):		
Ching-Leou T. ng	Decemb r 4, 2001	
First Assignor	Date of Execution	
Susan P. Weinbach	December 11, 2001	
Second Assignor	Date of Execution	
Lloyd G. Tillman	December 11, 2001	
Third Assignor	Date of Execution	
Richard S. Geary	December 6, 2001	
Fourth Assignor	Date of Execution	
Gr orgy E. Hardee	December 11, 2001	
Fifth Assignor	Date of Execution	
Sixth Assignor	Date of Execution	
Additional name(s) of conveying party(ies) attached? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		
2. Name and address of receiving party(i s):		
Name : ISIS Pharmaceuticals, Inc.		
Street Address: 2292 Faraday Avenue		
City: Carlsbad		
State	California	ZIP 92008
Additional name(s) & address attached? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		
3. Nature of Conveyance (check only one):		
<input checked="" type="checkbox"/> New Assignment <input type="checkbox"/> Merger <input type="checkbox"/> License Agreement <input type="checkbox"/> Security Agreement <input type="checkbox"/> Change of Name <input type="checkbox"/> Other:		
<input type="checkbox"/> Cross-reference of Assignment filed in United States Application No. / , recorded on _____ at Reel No. _____ and Frame No. _____		

4. Identification of Application number(s), patent number(s) OR date of execution of application to which assignment refers:

Application Nos.:	Patent Nos.:	Date application was signed by the first named executing inventor
09/935,316 filed August 22, 2001		(Fill-in this date only if assignment is filed together with a new application)

5. Name and address of party to whom correspondence concerning documents should be mailed:	6. Total number of applications and patents involved: _____
<p>Nam : Emma R. Dailey        WOODCOCK WASHBURN LLP        One Liberty Place - 46th Floor        Philadelphia, Pennsylvania 19103-7301        215-568-3100</p> <p>7. Total fee (37 CFR 3.41): ..... \$40.00  <input checked="" type="checkbox"/> Enclosed  <input type="checkbox"/> Authorized to be charged to Deposit Account Number 23-3050</p> <p>8. Please charge any deficiency or credit any overpayment to Deposit Account Number 23-3050</p>	

**DO NOT USE THIS SPACE**

**9. Statement and signature.**

*To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.*

Emma R. Dailey/48,491

**Name of Person Signing/Reg. No.**

**Signature**

January 30, 2002

Dat

Total number of pages including cover sheet, assignment document and additional pages attached thereto: 6

Mail documents to be recorded with required cover sheet information to:

Commissioner of Patents and Trademarks  
Box Assignments  
Washington, D.C. 20231